

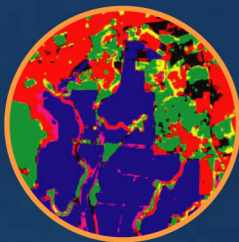


STRATEGIC STUDIES CONFERENCE

# Nuclear and Conventional Forces:

*Issues for National Security, Science and Technology*

A Los Alamos National Laboratory Conference held at  
The Los Alamos Study Center  
April 28–May 1, 2003





*As the United States further defines and implements the Quadrennial Defense Review, the Nuclear Posture Review, and the National Security Strategy, the evolving capabilities, roles, and impacts of nuclear and conventional forces raise critical questions.*

Will the nuclear and conventional forces necessary to support a robust deterrent and defense capability be available in the future?

How should these forces and the strategic Triad relate to other military and nonmilitary national security capabilities?

What is the role of science and technology in bringing about changes in nuclear and conventional forces?

How should these capabilities be integrated?

How will arms control and nonproliferation obligations and objectives affect the development of these new forces?

What role will cooperative programs and international agreements in nonproliferation and arms control play in the new security environment?

How will U.S. and international security be affected by effective defenses, command and control, intelligence, and other capabilities?



# Ideas That Change the World 60 years 1943 - 2003



*This conference will convene national and international experts to address emerging defense requirements in the context of the new realities of the international security environment. It will also explore the nature of evolving nuclear and conventional forces; prospects and issues related to their integration and transformation; and the resulting science and technology challenges.*



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Visit our Web site for conference details and registration information

[NewTriad.lanl.gov](http://NewTriad.lanl.gov)





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The conference is organized in eight sessions

## 1 The New Strategic Environment

What key political, economic, social, technical, and other issues drive the changes in the international security environment? How has the end of the Cold War shaped the current strategic environment? Who are the other major state actors on the international security stage, and what are their roles? How will the United States and the world deal with the unprecedented advantage the United States has in military and economic power? What are the likely threats to security and stability in the future?

## 2 Deterrence and Beyond: Strategic Responses

What are the policy implications—especially the nuclear policy implications—of the new security environment? What are the future roles of nuclear weapons and conventional forces in the context of evolving security requirements? What alternatives to nuclear deterrence might be possible in the future? Is a world without nuclear weapons achievable or even desirable? How can we better understand the evolution of nuclear deterrence in meeting national and international security needs?

## 3 Evolution of Nuclear Forces

How can and should nuclear forces evolve to meet changing national security requirements? Will today's nuclear weapons be able to meet these and future needs? How should new nuclear-weapon systems be configured? What are the greatest technical challenges in meeting nuclear stockpile requirements? How can we ensure our ability to respond to these challenges? How can a science-based stockpile stewardship program be sustainable and be able to meet these challenges in the absence of nuclear testing?

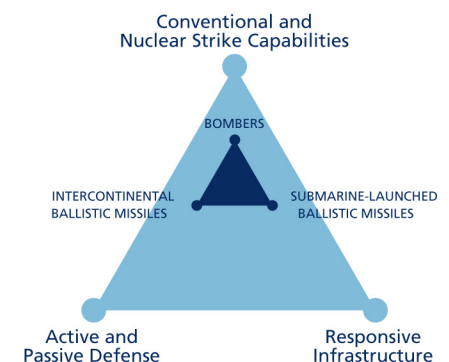
## 4 Defense Transformation and New Roles for Conventional Forces

How have conventional force capabilities evolved to meet changing security requirements? How has, and will, the evolution in these capabilities drive changes in U.S. military posture? What will be the greatest technical and operational challenges in the future? What role should Information Operations play in the strategies for conventional and nuclear force operations? What are the anticipated requirements for Command, Control, and Communications Computer Systems, Intelligence, Surveillance and Reconnaissance (C<sup>4</sup>ISR), as well as for other support capabilities?



## 5 Integration of the New Triad

How should U.S. nuclear and conventional forces, together with supporting elements, be integrated to provide a robust deterrent and defense capability? What kinds of tradeoffs should be anticipated between nuclear and conventional forces and between offense and defense capabilities? How will these force capabilities be integrated with C<sup>4</sup>ISR and associated support capabilities? What political and technological factors may hinder achieving this integrated capability?



## 6 Implications and Issues: International Perspectives

What will be the reactions of others to the new strategic environment and to the path being pursued by the United States? What have been, and might be, the approaches taken by others in response to the changing international security environment and to changing U.S. strategy? What role will coalition-building play?

## 7 Implications and Issues: Alliances, Arms Control, Nonproliferation, and Counter-Proliferation

What are the implications of the new U.S. defense strategy for broader international security interests? How will the evolving nuclear/conventional force structure relate to other military and nonmilitary national security capabilities and interests? How will existing and future arms control and nonproliferation obligations and objectives be affected by the development of these capabilities? What will be the role of cooperative engagement, and nonproliferation and arms control agreements in achieving U.S. national and international security objectives? How will the U.S. defense strategy, together with associated forces and capabilities, affect security relationships between the United States, its traditional allies, and other countries?

## 8 Roundtable on Critical Questions for Science, Technology, and National Security

Each conference session will identify critical questions to be discussed by a panel of experts at a closing round table.

